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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HANDAL, KAITI V

ART UNIT	PAPER NUMBER
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1764

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/903,983

Applicant(s)

MYERS ET AL.

Examiner

Kaity Handal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-26 and 33-42 is/are pending in the application.
- 4a) Of the above claim(s) 33,41 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-26 and 34-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 21-26 and 33-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 33 and 41-42 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 33, 41-42 are directed to the method of making the claimed bushing and thereby do not add any structural limitation to the claimed housing.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 33 and 41-42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

Claims 21-26 are objected to because of the following informalities: the format of the amended text (highlighted text) is not proper. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 21-26, 34-35, and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Kruger (EP 992,659 - corresponding to US 6,555,570).

With respect to claims 21 and 34, Kruger discloses an exhaust system for an internal combustion engine comprising: a shell having an outer wall (fig. 10, 226) and an inner wall (240), wherein the shell forms a bushing (259) defining an opening through and connects the outer wall (226) and the inner wall (240); and an oxygen sensor (260) disposed through the bushing (259) such that a portion of the oxygen sensor (260) extends into an interior portion of the shell (see, for example, Fig. 2 as well); wherein the bushing (fig. 10, 259) is formed through the shell (col. 13, lines 15) from a displaced portion of the outer wall (226) and a displaced portion of an inner wall (240) (as illustrated).

With respect to claim 22, Kruger discloses that the bushing (259) has a flat surface on an end opposite the inner wall (see, for example, Fig. 2).

With respect to claim 23, Kruger discloses provision of insulation disposed between the outer wall and the inner wall and in physical contact with the bushing (259) (see, for example, Fig. 2) (col. 3, lines 18-25).

With respect to claim 24, Kruger discloses that the bushing (259) is in the rounded portion of the shell (see, for example, Fig. 2).

With respect to claim 25, Kruger discloses that the shell is a double walled end-cone (see, for example, Fig. 2).

With respect to claim 26, Kruger discloses that threads are form in the bushing (see, for example, col. 9, lines 1-2 and Fig. 2).

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With respect to claim 35, Kruger discloses wherein the bushing (59) secures the inner wall (240) to the outer wall (226) (as illustrated).

With respect to claim 37, Kruger discloses wherein the exterior surface (of (226) in fig. 10) of the end cone (not numbered but illustrated) is curved (as illustrated) and a portion of the bushing (259) is configured to have a flat surface (illustrated) disposed about a periphery of the opening of the bushing (259), wherein the flat surface is positioned away from the exterior surface of the end cone (illustrated).

With respect to claim 38, Kruger discloses further wherein a plurality of threads formed in the opening of the bushing (as illustrated in (fig. 10)) (col. 13, lines 4-5).

With respect to claim 39, Kruger discloses further wherein a sensor is secured to the bushing (col. 13, lines 4-5).

With respect to claim 40, Kruger discloses wherein the bushing (259) further comprises a surface configured to engage a portion of a sensor (260) secured to the bushing (259), wherein the surface is positioned away from the exterior surface of the end cone (226) and wherein the exterior surface of the end cone (226) is curved (as illustrated).

Instant claims 21-26 structurally read on the apparatus of Kruger.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 21-26, 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima (5,615,551) in view of Kruger (EP 992,659 - corresponding to US 6,555,570).

With respect to claims 21, 23, 25, 34 and 36 Matsushima discloses an exhaust system for an internal combustion engine comprising:

a catalytic converter unit 10;

a bushing 34 provided in a shell wall of end cone of said catalytic converter unit; and an oxygen sensor 36 positioned within exhaust flow of the catalytic converter unit and extending through said bushing 34 (Figs. 2-5), wherein said oxygen sensor is positioned in said endcone at an angle less than 90 degrees to the centerline of the catalytic converter unit (Fig. 3, col. 3, lines 1-12).

The apparatus of Matsushima is substantially the same as that of the instant claim but fails to disclose provision of a double walled shell/endcone with insulation therebetween.

However, Kruger discloses provision of a catalytic converter unit includes an insulated wall construction having an inner wall spaced from an outer wall.

It would have been obvious to one having ordinary skill in the art to provide an insulated wall construction of Kruger in the apparatus of Matsushima since such insulated wall construction would provide a good thermal insulation as taught by Kruger.

With respect to claims 22, 26, Matsushima discloses that the bushing has threads 44 disposed through the shell wall (col. 4, lines 15-24, Figs. 3-4); and a substantially flat surface 50 (col. 2, lines 62-67, Figs. 3-4).

With respect to claim 24, Kruger discloses that the bushing 59 is in the rounded portion of the shell (see, for example, Fig. 2).

At the time of the invention was made, it would have been obvious to one skilled in the art to place the oxygen sensor of Matsushima at the rounded portion of the shell as taught by Kruger since positioning the parts of the apparatus is no more than a design choice, and well within the knowledge of one skilled in the art as evidenced by Kruger and since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikçe, 86 USPQ 70.

Response to Arguments

Prior Art

In response to applicant's argument that Kruger fails to teach or disclose a bushing "formed in the double wall arrangement from a displaced portion of the outer

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wall and a displaced portion of the inner wall, wherein the displaced portion of the inner wall and the displaced portion of the outer wall are merged together to define the bushing". Examiner respectfully disagrees. Applicant seems to be attempting to claim the method of making the bushing rather than the structure itself. Figure 10 illustrates clearly that bushing (259) is formed through the shell (col. 13, lines 15) in a double wall arrangement from a displaced portion of the outer wall (226) and a displaced portion of an inner wall (240).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaity Handal whose telephone number is (571) 272-8520. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KH

3/7/2007


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